

REMARKS

The claims remaining in the application are 1 through 18. Claims 1-18 are rejected. Claim 7 is amended.

The Applicant would like to thank the Examiner for the quick and courteous Office Action.

Claim Objection

The Examiner objected to claim 7 under 37 CFR §1.75 as being a substantial duplicate of claim 4 of the instant application.

The Applicant appreciates the Examiner pointing out this inadvertent error, and respectfully directs the Examiner's attention to the amendment to dependent claim 7 herein where the dependency has been changed from claim 1 to claim 3. The Applicant thus respectfully submits that claims 4 and 7 thus no longer cover the same thing and may not be considered substantial duplicates.

Reconsideration is respectfully requested.

Disclosure Objection

The Examiner objected to the disclosure because of the following informalities: Page 1 of the Specification requires amending to recite that the parent application has matured into U.S. Pat. No. 6,695,968.

Again, the Applicant appreciates the Examiner pointing out this concern and respectfully directs the Examiner's attention to the amendment to paragraph [0001] where the corresponding patent number and issue date have been inserted.

Reconsideration is respectfully requested.

35 U.S.C. §103(a) Rejection Over Bellos, et al. in view of Augustin, et al.

The Examiner rejected claims 1-13 under 35 U.S.C. §103 as being allegedly unpatentable over U.S. Pat. No. 5,853,592 to Bellos, et al. in view of U.S. Pat. No. 5,045,212 to Augustin, et al. for reasons of obviousness.

The Examiner contends that Bellos, et al. discloses a composition, for separating water-soluble organics and water essentially consisting of a hydrophilic, hydroxymono-carboxylic acid, such as hydroxyacetic acid or AHA, such organic acid optionally constituting essentially all or 99% of the active ingredient. The Examiner finds that Bellos, et al. disclose that the composition may comprise a "minor amount" of other ingredient such as a demulsifier.

For claims 8 through 18, the Examiner finds that Bellos, et al. indicates a relatively high ratio of AHA to minor ingredient of demulsifier.

For claims 5-18, the Examiner asserts the composition may comprise also water-like fluid phase or water and other solubilized organics, such as organic wetting agents, that are soluble in the added water. The Examiner finds that Bellos, et al. discloses that if necessary, the composition is added to a fluid mixture being separated, including water and solubilized organics resulting in a mixture encompassing the water and organics being separated as well as the active organic acid ingredient and emulsifier.

The Examiner admits that the instant claims all differ in requiring the demulsifier to constitute an anionic polymer. However, the Examiner alleges that Augustin, et al. teaches to separate oil/water emulsions by anionic demulsifiers. The Examiner contends that it would have been obvious to one of ordinary skill in the art to have employed the anionic demulsifiers taught by Augustin, et al. as the demulsifier of Bellos, et al. since these demulsifiers are shown to result in separated water phase, having an environmentally permissible very low degree of contamination with oily contaminants, and lower than other well known types of demulsifiers.

The Examiner further asserts that Augustin, et al. teaches the anionic polymer being copolymers of acrylic or methacrylic acid and acrylamides and esters thereof for claims 4, 7, 13, and 18, and these having a high degree of polymerization as in claims 5, 6 and 14.

The Applicant respectfully traverses.

To support an obviousness rejection, the Examiner has the initial burden of establishing a *prima facie* case of obviousness of the pending claims over the cited prior art, *In re Oeticker*, 977 F.2d 1443, 1445; 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992).

Bellos, et al. concerns oil well production fluids composed of oil and water and containing in excess of 100 ppm water soluble petroleum carboxylates in anionic form dissolved in the water which are treated by acidifying the fluid to a pH of 6.0 or lower with a combination of a strong organic acid and a strong mineral acid and then is intimately mixed. The oil and water are separated one from the other. The content of the water soluble organics in the water is thereby substantially transferred to the oil phase. (Abstract).

Bellos, et al. discloses the very general possibility of adding “demulsifiers” to his acids; see column 4, line 2; and column 7, line 2, lines 17-21. However, Bellos, et al. provide *no* indication what type or kind of demulsifier is suitable, appropriate or necessary. The subsequent Bellos, et al. Example includes many components but no demulsifier. Bellos, et al.’s other references to demulsifiers are likewise non-specific or irrelevant (e.g. those for water-in-oil emulsions in desalters). It is respectfully submitted that there is no mention, disclosure or suggestion of anionic, cationic, nonionic, polymeric, monomeric, organic, inorganic, hydrophilic, lipophilic, amphophilic, omniphilic, or any other kind or type of demulsifier. Thus, there is no reason for one having only *ordinary* skill in the art to choose an anionic organic polymer from that infinite universe of possibilities, based on the scant teachings of Bellos, et al. There is no hint or suggestion that any particular class would be any more appropriate than all the other possibilities, much less that an anionic polymer would be appropriate. No mechanism or thesis provided in Bellos, et al. to make this choice, but the single, highly ambiguous word “demulsifier”. It is respectfully submitted that one having ordinary skill in the art has no idea what demulsifier to use or why.

The Applicant would respectfully note that all of the claims require an *anionic* polymer. The Examiner essentially admits that Bellos, et al. do not teach or suggest an anionic polymer, and turns to the teachings of Augustin, et al.

Augustin, et al. concerns a process “for the separation of oil-in-water emulsions by treatment of the emulsions with organic ionic demulsifiers and/or inorganic demulsifiers [comprising] carrying out the separation in two steps by first adding an *organic cationic demulsifier* to the o/w emulsions, and then adding an *inorganic demulsifier*, separating the oil phase from the resulting two-phase system and then treating the

aqueous phase first with an *inorganic demulsifier* and then with an organic anionic demulsifier.” (Abstract, emphasis added.)

It is respectfully submitted that Augustin, et al. does not clarify the situation or add anything to understanding of it for one having only ordinary skill in the art. Augustin, et al. teaches that anionic acrylic copolymers are included in the class of organic anionic demulsifiers that *must be used in combination with inorganic* anionic demulsifiers, organic *cationic* demulsifiers, and *inorganic cationic* demulsifiers to remove insoluble oil from water. Augustin, et al. is consistent in teaching that all must be used together, and repeats this combination many times. There is no mention or implicit inclusion in Augustin, et al. of *any* kind of acid, organic or inorganic, among the variety of species taught. Thus, it is respectfully submitted that there is no reason to pluck out from this broad, almost all-inclusive list some anionic acrylic copolymers to use without the other three types of chemicals and form a combination instead with something else entirely different.

“...[T]he examiner has presented no line of reasoning ... as to why the artisan viewing only the collective teachings of the references would have found it obvious to selectively pick and choose various elements and/or concepts from the several references relied on to arrive at the claimed invention.” *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (B.P.A.I. 1985).

“The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.” *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) cited in *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990).

“Our reviewing courts have often advised the Patent and Trademark Office that it can satisfy the burden of establishing a *prima facie* case of obviousness *only* by showing some objective teaching in either the prior art, or knowledge generally available to one of ordinary skill in the art, that ‘would lead’ that individual ‘to combine the relevant teachings in the references.’ Accordingly, an examiner *cannot* establish obviousness by locating references which describe aspects of a patent applicant’s invention without *also* providing *evidence of the motivating force which would impel one skilled in the art to do*

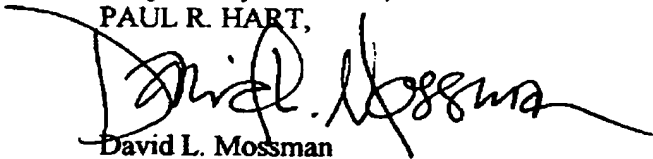
what the patent applicant has done." (Citations omitted; emphasis added.) *Ex parte Levengood*, 28 U.S.P.Q.2d 1300, 1302 (B.P.A.I. 1993).

The Applicant would respectfully submit that there is nothing in Bellos, et al. or Augustin, et al. or the combination thereof that would impel one having *ordinary* skill in the art to make the combination supposed by the Examiner. There is *no* hint in Augustin, et al. that that one class of demulsifier would be any more appropriate than all the others mentioned. There is no mechanism or thesis provided to connect the two references, but the single, highly ambiguous word "demulsifier", it is respectfully submitted. Again, one having ordinary skill in the art has no idea what to use or why.

For all of these reasons it is respectfully submitted that the Examiner has not made a *prima facie* case of obviousness. Reconsideration of the claims and withdrawal of the rejection are respectfully requested.

It is respectfully submitted that the arguments and amendments presented above overcome the rejections and place the claims in condition for allowance. Reconsideration and allowance of the claims are respectfully requested. The Examiner is respectfully reminded of his duty to indicate allowable subject matter. The Examiner is also invited to call the Applicant's attorney at the number below for any reason, especially any reason that may help advance the prosecution.

Respectfully submitted,
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